

# SB3562



## 98TH GENERAL ASSEMBLY

### State of Illinois

2013 and 2014

SB3562

Introduced 2/14/2014, by Sen. Dan Kotowski

#### SYNOPSIS AS INTRODUCED:

225 ILCS 732/1-21 new

Amends the Hydraulic Fracturing Regulatory Act. Provides that the Director of Natural Resources shall suspend acceptance, approval, and issuance of all new permits for high volume horizontal hydraulic fracturing wells and operations or horizontal drilling wells with fracturing operations for extraction of oil, liquid natural gas, and natural gas on the effective date of this amendatory Act of the 98th General Assembly. Creates the Radioactivity in Fracturing Waste Task Force. Provides that the Task Force shall investigate and write a report outlining the effects of high volume horizontal hydraulic fracturing operations, horizontal drilling with fracturing operations for extraction of oil, liquid natural gas, and natural gas, or both in relation to TENORM and low level radioactive waste. Effective immediately.

LRB098 19568 MGM 54758 b

FISCAL NOTE ACT  
MAY APPLY

A BILL FOR

1 AN ACT concerning regulation.

2 **Be it enacted by the People of the State of Illinois,**  
3 **represented in the General Assembly:**

4 Section 5. The Hydraulic Fracturing Regulatory Act is  
5 amended by adding Section 1-21 as follows:

6 (225 ILCS 732/1-21 new)

7 Sec. 1-21. Radioactivity.

8 (a) As used in this Section:

9 "Low level radioactive waste":

10 (1) has the same meaning as the term under the Illinois  
11 Low Level Radioactive Waste Management Act; and

12 (2) includes waste used in, and generated by, high  
13 volume horizontal hydraulic fracturing wells and  
14 operations, horizontal drilling wells with fracturing  
15 operations for extraction of oil, liquid natural gas, and  
16 natural gas, or both, specifically including, but not  
17 limited to: all waste matter, all flowback water, produced  
18 water, all flowback and produced non-water liquids, fluids  
19 and other non-water matter, all drill cuttings, radium salt  
20 precipitate found coating pipes, tanks, and equipment,  
21 slurries, contaminated soil, soil under pits and pit  
22 liners, muds, drill casings, worker protection clothing  
23 and equipment. This paragraph (2) shall apply until this

1 waste is proven to not be low level radioactive waste by at  
2 least 2 testings for radioactivity and radioactive  
3 elements, using a laboratory that is accredited by the  
4 federal government, and using U.S. Department of Energy  
5 spectrographic protocols for radioactivity, and include at  
6 minimum: testing for total gross alpha, beta and gamma  
7 rays, and specialized testing for radioactive uranium-235  
8 and uranium-238, thorium-232, radium-226, radium-228,  
9 bismuth-214, lead-214, actinium-228, thallium-208, and  
10 including radon gas, within 5 days before and 14 days after  
11 the flowback period begins or the day of or day before the  
12 end of flowback, if flowback ends before 9 days, and within  
13 5 days before or 65 days after the flowback period ends.

14 "Radiation" includes alpha rays, beta rays, gamma rays,  
15 X-rays, neutrons, high-speed electrons, high-speed protons,  
16 and other atomic particles. "Radiation" does not include sound  
17 or radio waves, visible light, or infrared or ultraviolet  
18 light, as defined in 29 C.F.R. 1910.1096(a)(1).

19 "Radioactive matter" means any material which emits, by  
20 spontaneous nuclear disintegration, corpuscular or  
21 electromagnetic emanations, as defined in 29 C.F.R.  
22 1910.1096(a)(2).

23 "TENORM" or "Technologically Enhanced Naturally Occurring  
24 Radioactive Material" means:

25 (1) a naturally occurring radioactive material whose  
26 radionuclide concentrations are increased by or as a result

1 of past or present human practices;

2 (2) waste used in and generated by high volume  
3 horizontal hydraulic fracturing wells and operations,  
4 horizontal drilling wells with fracturing operations for  
5 extraction of oil, liquid natural gas, and natural gas, or  
6 both, specifically including: all waste matter, all  
7 flowback water, produced water, all flowback and produced  
8 non-water liquids, fluids and other non-water matter, all  
9 drill cuttings, radium salt precipitate found coating  
10 pipes, tanks, and equipment, slurries, contaminated soil,  
11 soil under pits and pit liners, muds, drill casings, worker  
12 protection clothing and equipment. This paragraph (2)  
13 shall apply until this waste is proven to not be TENORM by  
14 at least 2 testings for radioactivity and radioactive  
15 elements, using a laboratory that is accredited by the  
16 federal government, and using U.S. Department of Energy  
17 spectrographic protocols for radioactivity, and include at  
18 minimum: testing for total gross alpha, beta and gamma  
19 rays, and specialized testing for radioactive uranium-235  
20 and uranium-238, thorium-232, radium-226, radium-228,  
21 bismuth-214, lead-214, actinium-228, thallium-208, and  
22 including radon gas, within 5 days before and 14 days after  
23 the flowback period begins or the day of or day before the  
24 end of flowback, if flowback ends before 9 days, and within  
25 5 days before or 65 days after the flowback period ends;  
26 and

1           (3) radioactivity that is brought up in waste by high  
2           volume horizontal hydraulic fracturing wells and  
3           operations, horizontal drilling wells with fracturing  
4           operations for extraction of oil, liquid natural gas, and  
5           natural gas, or both.

6           "TENORM" does not include background radiation or the  
7           natural radioactivity of rocks or soils or source material or  
8           byproduct material as those terms are defined in the federal  
9           Atomic Energy Act of 1954 (AEA 42 USC §2011 et seq.) and  
10           relevant regulations implemented by the Conference of  
11           Radiation Control Program Directors.

12           (a-5) In addition to the applicability under Section 1-20,  
13           this Section applies to all activities surrounding and  
14           including (1) high volume horizontal hydraulic fracturing  
15           wells and operations, (2) horizontal drilling wells with  
16           fracturing operations for extraction of oil, liquid natural  
17           gas, and natural gas, or (3) both.

18           (b) The Director shall suspend acceptance, approval, and  
19           issuance of all new permits for high volume horizontal  
20           hydraulic fracturing wells and operations, and horizontal  
21           drilling wells with fracturing operations for extraction of  
22           oil, liquid natural gas, and natural gas under this Act, the  
23           Illinois Oil and Gas Act, and any other law, on the effective  
24           date of this amendatory Act of the 98th General Assembly.

25           (b-5) All waste water, fluids, and waste debris, as defined  
26           in paragraph (2) of the definition of TENORM under subsection

1 (a) of this Section, shall be treated as TENORM, until all  
2 tests under paragraph (2) of the definition of TENORM under  
3 subsection (a) of this Section show that the tested material is  
4 below the thresholds for TENORM and low level radioactive  
5 waste, as determined by the Illinois Emergency Management  
6 Agency.

7 (b-10) All material listed in paragraph (2) of the  
8 definition of TENORM or paragraph (2) of the definition of low  
9 level radioactive waste used in and generated by high volume,  
10 horizontal hydraulic fracturing operations or horizontal  
11 drilling with fracturing operations for extraction of oil,  
12 liquid natural gas, and natural gas shall be handled at all  
13 times according to the requirements of the Illinois Low-Level  
14 Radioactive Waste Management Act and all other applicable State  
15 and federal laws and regulations governing TENORM, low level  
16 radioactive waste, and radioactive matter.

17 (b-15) A permit holder may apply to the Illinois Emergency  
18 Management Agency for exemption from one or more of the  
19 requirements of this Section if the permit holder shows that  
20 the specific type of material sought for exemption is  
21 determined to be below the thresholds for TENORM and low level  
22 radioactive waste by the minimum scientific testing protocol  
23 requirements as defined in this Section, and the procedures  
24 defined in subsections (b-10), (b-15), (b-20), and (b-25) of  
25 this Section are met. To apply for an exemption, the permit  
26 holder shall obtain the minimum required scientific testing

1 protocols specified in subsections (b-10), (b-15), (b-20), and  
2 (b-25) of this Section for the materials sought to be exempted  
3 from these mandates, at the permit holder's own expense. The  
4 Illinois Emergency Management Agency shall make the  
5 determination as to whether the exemption should be granted  
6 based on the test results. The permit holder shall request that  
7 the laboratories send all testing results directly to the  
8 Illinois Emergency Management Agency. The Illinois Emergency  
9 Management Agency shall then notify the Department of Natural  
10 Resources of its determination regarding the permit holder's  
11 request for an exemption. The Department of Natural Resources  
12 shall implement and enforce the determination and directives  
13 set by the Illinois Emergency Management Agency governing any  
14 exemptions granted.

15 (b-20) The Illinois Emergency Management Agency shall make  
16 all determinations as to sufficiency of the required testing  
17 and as to the content of all directives that result from this  
18 testing for the labeling, management, transportation,  
19 treatment, disposal, handling, federal occupational safety  
20 laws or rules, and public health notifications for the tested  
21 materials. These determinations by the Illinois Emergency  
22 Management Agency shall be final and must be accepted and  
23 implemented in full by the Department of Natural Resources.

24 (b-25) All test results from the testing of TENORM and low  
25 level radioactive waste shall be returned from the testing  
26 laboratories directly to the Illinois Emergency Management

1 Agency. The Illinois Emergency Management Agency shall  
2 determine whether the tested material is below the thresholds  
3 for TENORM and low level radioactive waste. Upon an affirmative  
4 determination that the specific type of material sought for  
5 exemption is below the thresholds for TENORM and low level  
6 radioactive waste, the Director of the Illinois Emergency  
7 Management Agency may exempt the permit holder from one or more  
8 of the requirements of this Section.

9 (c) This Act and its rules shall be construed together with  
10 the Illinois Low-Level Radioactive Waste Management Act, the  
11 Central Midwest Interstate Low-Level Radioactive Waste  
12 Compact, and all other applicable State and federal laws and  
13 rules governing radioactive matter.

14 (d) The Radioactivity in Fracturing Waste Task Force is  
15 hereby created with the following members:

16 (1) two members appointed by the Director of the  
17 Illinois Emergency Management Agency;

18 (2) one member appointed by the Director of Natural  
19 Resources;

20 (3) one member appointed by the Director of the  
21 Groundwater Advisory Council established under the  
22 Illinois Groundwater Protection Act;

23 (4) one member appointed by the Illinois Environmental  
24 Protection Agency;

25 (5) one member appointed by the Department of Public  
26 Health who shall serve as chairperson of the Task Force;

1           and

2           (6) one member appointed by the Illinois Department of  
3           Labor, with a working knowledge of federal occupational  
4           safety laws or rules for working with and around  
5           radioactivity.

6           (e) Members of the Radioactivity in Fracturing Operations  
7           Task Force shall be appointed within 60 days after the  
8           effective date of this amendatory Act of the 98th General  
9           Assembly. The Radioactivity in Fracturing Operations Task  
10          Force shall:

11           (1) meet at least once a month, either in person or  
12           through video conferencing or other technology via the  
13           Internet;

14           (2) operate without pay, but with all expenses paid for  
15           the functioning of the Radioactivity in Fracturing  
16           Operations Task Force to be allocated by the Illinois  
17           Emergency Management Agency;

18           (3) provide a fully researched report as described in  
19           this Section;

20           (4) hold at least 3 public hearings throughout this  
21           State to discuss these issues and solicit input from the  
22           public;

23           (5) recommend amendments to this Act necessary to  
24           conform this Act to the Low-Level Radioactive Waste  
25           Management Act and its related administrative rules, and  
26           all other existing State and federal laws concerning

1 radioactivity and protection of workers from  
2 radioactivity; this set of recommended amendments and  
3 rules shall include the process of review of laboratory  
4 testing, the process of allowing exemptions, the written  
5 directives by the Illinois Emergency Management Agency for  
6 the labeling, management, transportation, treatment,  
7 disposal, handling, applicable federal occupational safety  
8 laws or rules, and public health notifications for the  
9 tested radioactive materials, the implementation, and  
10 enforcement of the Illinois Emergency Management Agency  
11 written review and directives by the Department of Natural  
12 Resources, and the well operator notification of these  
13 directives and enforcement procedures;

14 (6) recommend a complete set of rules based on the  
15 Conference of Radiation Control Program Directors' (A)  
16 model regulation for TENORM and (B) Part N of "Suggested  
17 State Regulation on Control of Radiation";

18 (7) recommend a complete set of rules for the  
19 protection of every person handling any matter used or  
20 generated in and by high volume, horizontal hydraulic  
21 fracturing operations, horizontal drilling with fracturing  
22 operations for extraction of oil, liquid natural gas, and  
23 natural gas, or both at the minimum requirements as set  
24 forth in 29 C.F.R. 1910.1096; these recommended rules shall  
25 include penalties for any person, corporation, or other  
26 entity who requires as a condition of employment, forces,

1 coerces, enters into an oral or written contract for the  
2 procurement of, or otherwise obtains or attempts to obtain  
3 any less protective worker protection measures than the  
4 minimum as provided in 29 C.F.R. 1910.1096, including  
5 through, by, from, or with any subcontractor or subsidiary  
6 corporation, of a Class 4 felony and fines of up to  
7 \$1,000,000 per day per violation per individual or entity;  
8 the rules shall also include provision for an interested  
9 person to apply to the circuit court for issuance of an  
10 injunction to enforce compliance, with damages and  
11 attorney's fees;

12 (8) fully investigate any and all adverse effects of  
13 high volume hydraulic fracturing operations, horizontal  
14 drilling with fracturing operations, or both with regard  
15 to:

16 (A) the oil and natural gas wells, Class II  
17 injection wells, the industry infrastructure and  
18 pipelines and their effects and potential risks to  
19 human health and the environment from TENORM and low  
20 level radioactive waste used in and generated by (i)  
21 high volume horizontal hydraulic fracturing  
22 operations, (ii) horizontal drilling with fracturing  
23 operations for extraction of oil, liquid natural gas,  
24 and natural gas, or (iii) both;

25 (B) the environmental and public health effects of  
26 TENORM and low level radioactive waste used in and

1 generated by spillage, leakage, fires, or blowouts of  
2 oil, liquid natural gas, and natural gas, its  
3 containment, processing infrastructure, and  
4 transportation infrastructure in (i) high volume  
5 horizontal hydraulic fracturing operations, (ii)  
6 horizontal drilling with fracturing operations for  
7 extraction of oil, liquid natural gas, and natural gas,  
8 or (iii) both;

9 (C) the environmental and public health effects of  
10 TENORM and low level radioactive waste used in and  
11 generated by spillage or leakage from open fracturing  
12 waste pits during (i) high volume horizontal hydraulic  
13 fracturing operations, (ii) horizontal drilling with  
14 fracturing operations for extraction of oil, liquid  
15 natural gas, and natural gas, or (iii) both;

16 (D) the environmental damage and public health  
17 effects of TENORM and low level radioactive waste used  
18 in or generated by (i) high volume horizontal hydraulic  
19 fracturing operations, (ii) horizontal drilling with  
20 fracturing operations for extraction of oil, liquid  
21 natural gas, and natural gas, or (iii) both of  
22 spillage, leakage, fires, or blowouts of hydraulic  
23 fracturing or fracturing fluids, chemicals, proppants  
24 and byproducts, its containment, processing  
25 infrastructure, and transportation infrastructure;

26 (E) the environmental damage and public health

1 effects of TENORM and low level radioactive waste used  
2 in or generated by (i) high volume horizontal hydraulic  
3 fracturing operations, (ii) horizontal drilling with  
4 fracturing operations for extraction of oil, liquid  
5 natural gas, and natural gas, or (iii) both, to water  
6 resources and water sheds;

7 (F) the recommended documentation of the federal  
8 Department of Energy testing protocols for radioactive  
9 matter used in or generated by (i) high volume  
10 horizontal hydraulic fracturing operations, (ii)  
11 horizontal drilling with fracturing operations for  
12 extraction of oil, liquid natural gas, and natural gas,  
13 or (iii) both;

14 (G) the recommended comprehensive documentation  
15 system and permanent retention of all documentation  
16 for tracking all TENORM and low level radioactive waste  
17 used in or generated by (i) high volume horizontal  
18 hydraulic fracturing operations, (ii) horizontal  
19 drilling with fracturing operations for extraction of  
20 oil, liquid natural gas, and natural gas, or (iii)  
21 both, from drilling site to transport to its  
22 disposition;

23 (H) recommended best practices for radon monitors  
24 during (i) high volume horizontal hydraulic fracturing  
25 operations, (ii) horizontal drilling with fracturing  
26 operations for extraction of oil, liquid natural gas,

1 and natural gas, or (iii) both; if radon is found to be  
2 released from (i) high volume horizontal hydraulic  
3 fracturing operations, (ii) horizontal drilling with  
4 fracturing operations for extraction of oil, liquid  
5 natural gas, and natural gas, or (iii) both, in large  
6 quantities, then recommendations for precautions for  
7 workers and residents should be given;

8 (I) best practices regarding the burning and  
9 flaring of radon in large quantities;

10 (J) recommendations for testing natural gas,  
11 liquid natural gas, and oil produced in this State for  
12 radon, and recommendations if the test shows high  
13 amounts of radon at the wellhead;

14 (K) recommendations for best practices for  
15 hand-held radiation monitors on the site of (i) high  
16 volume horizontal hydraulic fracturing operations,  
17 (iii) horizontal drilling with fracturing operations,  
18 or (iii) both and dosimeters worn by the workers to  
19 measure for Total Gamma and Total Beta as a general  
20 alert, as well as radon monitors worn by the workers,  
21 and for compliance with federal occupational safety  
22 laws or rules if the monitors and dosimeters exceed  
23 acceptable limits, and the radioactivity testing of  
24 fracturing waste is reported with results that dictate  
25 compliance with all federal occupational safety laws  
26 or rules for radioactivity in the work place; and

1           (L) recommendations for implementation of the  
2           testing of all fracturing waste, and the regulatory  
3           framework under this Act, and recommendations for the  
4           communication and timely follow up of testing of all  
5           fracturing waste, and recommendations for the  
6           determinations of methods of labeling, management,  
7           transportation, treatment, disposal, handling, federal  
8           occupational safety laws or rules, and public health  
9           notifications described in this Act, by and between the  
10           appropriate personnel at the Illinois Emergency  
11           Management Agency and the Department.

12           (f) The Task Force shall investigate and write a report  
13           outlining the effects of (i) high volume horizontal hydraulic  
14           fracturing operations, (ii) horizontal drilling with  
15           fracturing operations for extraction of oil, liquid natural  
16           gas, and natural gas, or (iii) both, in relation to TENORM and  
17           low level radioactive waste, to be submitted to the General  
18           Assembly, the Governor, the Task Force on Hydraulic Fracturing  
19           Regulation, the Illinois State Water Survey, the Illinois  
20           Emergency Management Agency, the Department of Natural  
21           Resources, the Groundwater Advisory Council established under  
22           the Illinois Groundwater Protection Act, the Illinois  
23           Environment Protection Agency, the Illinois Groundwater  
24           Association, the Department of Public Health, and to the public  
25           via the website of the Illinois Emergency Management Agency and  
26           the website of Department of Natural Resources, which shall

1 include recommendations and conclusions about:

2 (1) the recommended rules and amendments to this Act  
3 described under paragraphs (5), (6), and (7) of subsection  
4 (e);

5 (2) the risks of drilling and extracting oil, liquid  
6 natural gas, and natural gas in relation to TENORM and low  
7 level radioactive waste;

8 (3) the risks of drilling and operating Class II  
9 injection wells for oil, liquid natural gas, and natural  
10 gas waste disposal in relation to TENORM and low level  
11 radioactive waste;

12 (4) the use of high volume horizontal hydraulic  
13 fracturing operations or horizontal drilling with  
14 fracturing operations waste or wastewater open pits in  
15 relation to TENORM and low level radioactive waste, and the  
16 public health and environmental effects of the use of that  
17 waste;

18 (5) the risks of spillage and leakage resulting in  
19 water contamination from oil, liquid natural gas, and  
20 natural gas wells and operations in relation to TENORM and  
21 low level radioactive waste;

22 (6) bonding requirements for infrastructure in  
23 relation to TENORM and low level radioactive waste from (A)  
24 high volume horizontal hydraulic fracturing operations,  
25 (B) horizontal drilling with fracturing operations for  
26 extraction of oil, liquid natural gas, and natural gas, or

1 (C) both;

2 (7) insurance requirements for infrastructure in  
3 relation to TENORM and low level radioactive waste during  
4 (A) high volume horizontal hydraulic fracturing  
5 operations, (B) horizontal drilling with fracturing  
6 operations for extraction of oil, liquid natural gas, and  
7 natural gas, or (C) both;

8 (8) best practices for the oil and natural gas industry  
9 in relation to TENORM and low level radioactive waste; and

10 (9) any and all additional recommendations related to  
11 TENORM and low level radioactive waste for the oil and  
12 natural gas industry and its (A) high volume horizontal  
13 hydraulic fracturing operations, (B) horizontal drilling  
14 with fracturing operations for extraction of oil, liquid  
15 natural gas, and natural gas, or (C) both.

16 (g) The report shall include recommendations to the General  
17 Assembly and the Governor for legislation to protect the public  
18 health, safety, and welfare and the environment of this State  
19 from any adverse effects of blowouts, spillage, leakage, and  
20 damages associated with high volume horizontal hydraulic  
21 fracturing operations or horizontal drilling with fracturing  
22 operations, wells, drilling, Class II injection wells, waste  
23 and waste water containment, transportation including,  
24 trucking accidents and hazmat emergency planning, pipelines,  
25 infrastructure, chemicals, proppants, and byproducts, in  
26 relation to TENORM and low level radioactive waste.

1       (h) The Task Force shall submit this report on or before  
2       July 1, 2015. The Task Force shall be dissolved on January 1,  
3       2016.

4       (i) This Section is repealed on January 31, 2016.

5       Section 99. Effective date. This Act takes effect upon  
6       becoming law.